



WS/WE100L-F1131

W100 Laser

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|-----------------|----------|
| WS/WE100L-F1131 | 6030714 |

Other models and accessories → www.sick.com/W100_Laser

Detailed technical data

Features

| | |
|--|---|
| Functional principle | Through-beam photoelectric sensor |
| Dimensions (W x H x D) | 11 mm x 31 mm x 20 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0 m ... 35 m |
| Sensing range | 0 m ... 30 m |
| Type of light | Visible red light |
| Light source | Laser ¹⁾ |
| Light spot size (distance) | Ø 30 mm (30 m) |
| Wave length | 650 nm |
| Laser class | 1 |
| Adjustment | Potentiometer, 270° |
| Special applications | Detecting small objects, Detection of objects moving at high speeds |

¹⁾ Average service life: 50,000 h at $T_U = +25$ °C.

Mechanics/electronics

| | |
|--|---|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | $\pm 10\%$ ²⁾ |
| Power consumption, sender | $\leq 15\text{ mA}$ ³⁾ |
| Power consumption, receiver | $\leq 20\text{ mA}$ ³⁾ |
| Switching output | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark rotary switch |
| Signal voltage PNP HIGH/LOW | $U_V - 1,8\text{ V} / \text{ca. }0\text{ V}$ |
| Output current $I_{\max.}$ | $\leq 100\text{ mA}$ |
| Response time | < 0.25 ms ⁴⁾ |
| Switching frequency | 2,000 Hz ⁵⁾ |
| Connection type | Cable, 3-wire, 2 m ⁶⁾ |
| Cable material | Plastic, PVC |
| Conductor cross section | 0.18 mm ² |
| Circuit protection | A ⁷⁾ B ⁸⁾ D ⁹⁾ |
| Weight | 50 g |
| Housing material | Plastic, ABS/PC/POM |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP65 |
| Items supplied | 2 Stainless steel mounting brackets (1.4301/304) BEF-W100-A |
| Ambient operating temperature | -10 °C ... +50 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ D = outputs overcurrent and short-circuit protected.

Safety-related parameters

| | |
|-------------------------|-----------|
| MTTF_D | 994 years |
| DC_{avg} | 0 % |

Certificates

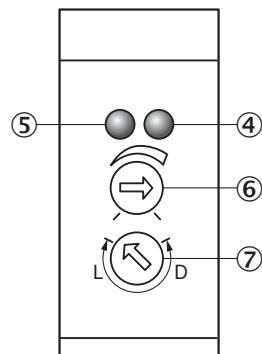
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |

| | |
|---|---|
| China-RoHS | ✓ |
| cRUIus certificate | ✓ |
| Laser safety (IEC 60825-1) certificate | ✓ |

Classifications

| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270901 |
| ECLASS 5.1.4 | 27270901 |
| ECLASS 6.0 | 27270901 |
| ECLASS 6.2 | 27270901 |
| ECLASS 7.0 | 27270901 |
| ECLASS 8.0 | 27270901 |
| ECLASS 8.1 | 27270901 |
| ECLASS 9.0 | 27270901 |
| ECLASS 10.0 | 27270901 |
| ECLASS 11.0 | 27270901 |
| ECLASS 12.0 | 27270901 |
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| UNSPSC 16.0901 | 39121528 |

Adjustments WS/WE100L



④ Orange LED indicator : switching output active

⑤ LED indicator green: power on

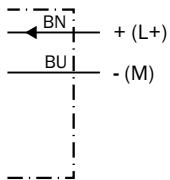
⑥ sensitivity control 270°

⑦ Light/ dark rotary switch: L = light switching, D = dark switching

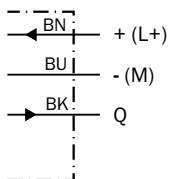
Connection type



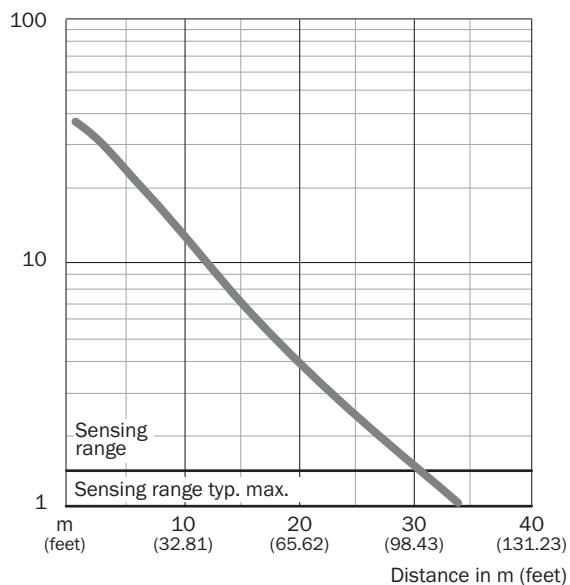
Connection diagram Cd-047



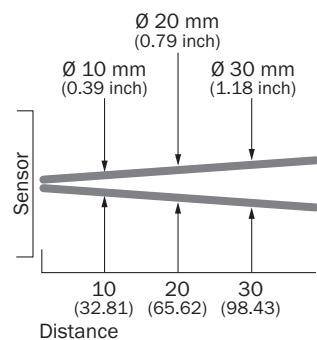
Connection diagram Cd-044



Characteristic curve WS/WE100L

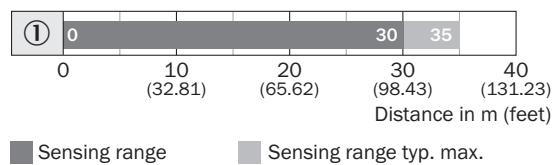


Light spot size WS/WE100L



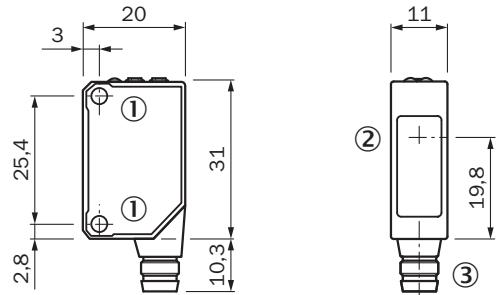
All dimensions in m (feet)

Sensing range diagram WS/WE100L



■ Sensing range ■ Sensing range typ. max.

Dimensional drawing WS/WE100L



Dimensions in mm (inch)

① Threaded mounting hole M3

② Center of optical axis

③ Connection

Recommended accessories

Other models and accessories → www.sick.com/W100_Laser

| | Brief description | Type | part no. |
|-----------------------|---|------------|----------|
| connectors and cables |  <ul style="list-style-type: none">Connection type head A: Male connector, M8, 3-pin, straight, A-codedDescription: UnshieldedConnection systems: Screw-type terminalsPermitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0803-G | 6037322 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

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